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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/320,637 05/26/99 STERNHEIMER

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EXAMINER

ALSTON & BIRD LLP
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CHARLOTTE NC 28234-4009

MARTINELL, J

ART UNIT PAPER NUMBER

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1633

DATE MAILED:

09/25/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 09/320,637	Applicant(s) Sternheimer
	Examiner James Martinell	Group Art Unit 1633

Responsive to communication(s) filed on May 26, 1999

This action is **FINAL**.

Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

Claim(s) 1-12 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

Claim(s) _____ is/are allowed.

Claim(s) 1-9 and 11 is/are rejected.

Claim(s) 10 and 12 is/are objected to.

Claims _____ are subject to restriction or election requirement.

Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on _____ is/are objected to by the Examiner.

The proposed drawing correction, filed on _____ is approved disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All Some* None of the CERTIFIED copies of the priority documents have been

received.

received in Application No. (Series Code/Serial Number) _____.

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

Notice of References Cited, PTO-892

Information Disclosure Statement(s), PTO-1449, Paper No(s). 2

Interview Summary, PTO-413

Notice of Draftsperson's Patent Drawing Review, PTO-948

Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

It does not identify the city and state or foreign country of residence of each inventor. Additionally, the residence and post office address are omitted.

The disclosure is objected to because of the following informalities.

(a) Claim 8 does not end with a period.

Appropriate correction is required.

Claims 10 and 12 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only. Claim 10 refers to both claims 9 and 3, and not in the alternative. Claim 12

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depends from claim 10 See MPEP § 608.01(n). Accordingly, the claims 10 and 12 not been further treated on the merits.

Claims 1-8 and 11 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims are vague, indefinite, incomplete, and incomprehensible.

- (a) The recitation of "associating with each amino acid a musical note whose frequency is transposed from the proper frequency of the amino acid" (claim 1) is vague, indefinite, and incomprehensible because the proper frequencies of amino acids are not described.
- (b) Claim 1 (b) is incomprehensible when taken as a whole.
- (c) The recitation of "the repartition" (claim 1) is incomplete because the term has no antecedent basis.
- (d) Claim 1 (c) is incomprehensible when taken as a whole.
- (e) The recitation of "said musical sequence of said amino acid chain" (claim 1) is incomplete because the phrase lacks antecedent basis.

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(f) The recitation of "tone quality" (claim 1) is vague and indefinite because the instant application fails to describe the derivation of a tone quality from a protein or a protein from a tone quality.

Additionally, the application does not describe a tone quality.

(g) The recitation of "said musical sequence" (claim 1) is incomplete because the phrase has no antecedent basis.

(h) The recitation of "rectifying individually said musical periods by adjusting the phrasing to the measure of said musical sequence" (claim 2) is vague, indefinite, and incomprehensible.

(i) The recitation of "adjusting" (claim 2) is vague, indefinite, and incomplete because the nature and degree of adjustment are not mentioned.

(j) Claim 2 is incomprehensible when taken as a whole.

(k) The recitation of "proportional to its mass" (claim 3 (a)) is vague, indefinite, and incomplete because the actual proportional value is not mentioned.

(l) Claim 3 (b) is incomprehensible when taken as a whole.

- (m) The recitation of "taking into account the proportion of each amino acid in the population of transfer RNAs within a cell where synthesis of said protein takes place" (claim 3 (b)) is vague, indefinite, and incomplete because the instant application does not describe any proportions of any particular tRNAs associated with any particular amino acids in any particular polypeptide.
- (n) The recitation of "synchronized frequencies" (claim 3 (b)) is vague and indefinite because the term is not defined.
- (o) The recitation of "taking into account" (claim 3 (b)) is vague, indefinite, and incomplete because no mention is made of a process step that is conditional on such "taking into account." The instant application does not describe what "taking into account" entails nor does it disclose the relationship between tRNA populations and the minimization of global harmonic distances between frequencies of amino acid pairs.

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- (p) The recitation of "said keynote frequency" (claim 3 (b)) is incomplete because the term lacks antecedent basis.
- (q) The recitation of "said code being relative to the biosynthetic stimulation" (claim 3) is vague, indefinite, and incomprehensible.
- (r) Claim 3(d) is incomprehensible when taken as a whole.
- (s) The recitation of "chromatic tempered scale" (claims 4 and 5) is vague and indefinite. The term is not defined.
- (t) The recitation of "said keynotes" (claim 5) is incomplete because the term has no antecedent basis.
- (u) The recitation of "which are deduced . . . with respect to central G" (claim 5) is vague, indefinite, and incomprehensible.
- (v) Claim 7 is incomprehensible when taken as a whole.
- (w) The recitation of "quantum vibrations associated to the mature protein after it is spatially folded back over itself"

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(claim 7) is vague, indefinite, and incomplete because the instant application does not describe the properties of such vibrations such that one of skill in the art can recognize or detect them.

- (x) Claim is vague and indefinite because the term "Argch" is undefined.
- (y) The recitation of "consists in the association to the different amino acids of the following colors" (claim 8) is vague, indefinite, and incomprehensible. The meaning of the passage is not known.
- (z) The recitation of "Gly = dark red . . . Trp = purple" (claim 8) is vague, indefinite, and incomprehensible. It is not known what is meant by the passage.
- (aa) The recitation of "method according to Claim 9" (claim 11) is inaccurate and misdescriptive because claim 9 is drawn to musical transcriptions, not to a method.
- (ab) Claim 11 is incomprehensible when taken as a whole.

The following is a quotation of the first paragraph of 35

U.S.C. § 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification is objected to under 35 U.S.C. § 112, first paragraph, as failing to provide an adequate written description of the invention. Each of the points mentioned in the above rejection (i.e. (a) - (ab)) is incorporated here. The invention is not described in such a way that one of skill in the art could understand and/or practice the invention.

Claims 1-8 and 11 are rejected under 35 U.S.C. § 112, first paragraph, for the reasons set forth in the objection to the specification.

Claims 1-8 and 11 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The claims are not enabled because the instant application does not disclose how to regulate protein synthesis. The instant application at pages 1-7

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discloses that protein synthesis is regulated according to the relationship of the modulation of vibration frequencies to the phase of protein chain elongation. The application states that the rate of protein synthesis increases if the modulation of vibration frequencies is in phase with protein chain elongation and the rate of protein synthesis decreases if the modulation of vibration frequencies is in phase opposition to protein chain elongation. The application fails to measure or define the phase of protein elongation or to disclose to one of skill in the art how to recognize the phase of protein chain elongation.

Additionally, it is not understood what is meant by a phase of protein chain elongation since it is well known that proteins are synthesized on polyribosomes (see either one of Darnell et al or Lehninger). Hence, on a given mRNA, various growing nascent polypeptide chains are in various states of elongation and are presumably in different phases of elongation. Also, since there is more than one mRNA encoding a given polypeptide in a given cell, and since organisms are made of a large number of cells, it is reasonable to conclude that all possible stages of elongation of a given polypeptide exist at any one time. Thus, there would

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seem to be no "phase" to the elongation of any particular type of polypeptide chain in any particular organism.

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 9 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claim is directed to musical transcriptions. The declaration under Rule 132 executed in 1999 and filed concurrently with the application is not convincing. First, the date of execution is not fully legible. Second, the annexes referred to do not describe carefully controlled experiments for all relevant conditions (e.g., temperature, amount of light, developmental stage of organism, etc.). Third, none of the annexes or the declaration itself shows any data in connection with the synthesis of any particular protein. The only reported observations deal with gross morphological properties.

Claims 1-8 and 11 are rejected under 35 U.S.C. 101 because the disclosed invention is inoperative and therefore lacks utility. The instant application does not disclose a set of

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operable parameters for the regulation of protein synthesis by administration of audible sound of any type. Additionally, there is no known principle that would lead one to reasonably believe that the regulation of protein synthesis by the playing of audible music to a subject could occur. This is particularly so in view of the discussion in the previous rejection, which discussion is incorporated here. The declaration under Rule 132 executed in 1999 and filed concurrently with the application is not convincing. First, the date of execution is not fully legible. Second, the annexes referred to do not describe carefully controlled experiments for all relevant conditions (e.g., temperature, amount of light, developmental stage of organism, etc.). Third, none of the annexes or the declaration itself shows any data in connection with the synthesis of any particular protein. The only reported observations deal with gross morphological properties.

Any inquiry concerning this communication should be directed to J. Martinell at telephone number (703) 308-0296.


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SENIOR LEVEL EXAMINER

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